

(e) After February 13, 2003, a telephone company shall only place new wireline facilities into service that can provide, as built or with additional equipment, the ability to transmit video capable of depicting a reasonable representation of motion.

(f) By February 13, 2003,

(1) a telephone company shall provide

(A) service using switching equipment that can provide E911 service when requested by the governmental agency responsible for that service and

(B) one-party service upon demand to subscribers; and

(2) a telephone company shall provide an end-to-end data transfer rate of no less than 28.8 kilobits per second.

(3) a telecommunications provider shall provide switched digital service that operates at a rate of at least 56 kilobits per second to any customer upon request.

(g) A telecommunications provider shall work towards

(1) elimination of party-line service and

(2) universal availability, upon request, of digital voice and data service of at least 56 - 164 kilobits per second; transmission and reception of high-bit-rate (no less than 1 megabit per second) data; and reception of video as described in (e) of this section.

(h) Compliance with the requirements of 3 AAC 53.700 - 3 AAC 53.720 may not be used to justify unreasonable or imprudent construction of facilities.

(Eff. __/__/__, Register __)

Authority:	AS 42.05.141	AS 42.05.221	AS 42.05.311
	AS 42.05.145	AS 42.05.241	AS 42.05.321
	AS 42.05.151	AS 42.05.291	AS 42.05.800

3 AAC 53.710. REPORTING REQUIREMENTS. (a) A telecommunications provider shall include and identify, in its capital plans required under 3 AAC 52.330, the capital projects planned to meet the requirements set out in 3 AAC 53.705.

(b) The capital plans filed in accordance with 3 AAC 52.330 must also include an estimate of the impact of the capital projects planned to meet the requirements of 3 AAC 53.705 if the projects are anticipated to increase a telecommunications provider's tariffed rates for service by three percent or more and if the estimated unseparated nontraffic-sensitive local loop revenue requirement is anticipated to increase by three percent or more. (Eff. __/__/__, Register __)

Authority:	AS 42.05.141	AS 42.05.221	AS 42.05.311
	AS 42.05.145	AS 42.05.241	AS 42.05.321
	AS 42.05.151	AS 42.05.291	AS 42.05.800

3 AAC 53.720. DEFINITIONS. (a) Unless the context indicates otherwise, in 3 AAC 53.700 - 3 AAC 53.720

(1) "bit rate" means the rate of transmission of telecommunications signals or intelligence in binary (two-state) form in bits per unit of time, e.g. megabits per second (Mb/sec), kilobits per second (kb/sec);

(2) "commercially feasible" means equipment is available and its cost and installation are reasonable;

(3) "emerging technologies" means new or not fully developed methods of telecommunications;

(4) "E911 service" is enhanced 911 service and means a service that provides call routing to an emergency response answering point based upon the calling telephone number, provides for the display of the physical location of the calling telephone at the answering point, and is authorized in AS 29.35.131 - 29.35.137.

(5) "intrastate interexchange carrier" means a carrier as defined in 3 AAC 52.340(36);

(6) "telephone company" means a carrier that provides telephone local exchange service as defined in 3 AAC 48.820(19);

(7) "telecommunications" has the same meaning as in AS 42.05.990(8);

(8) "telecommunications provider" means a telephone company as defined in (6) of this subsection and an intrastate interexchange carrier as defined in 3 AAC 52.340(36) that is facilities based; and

(9) "wireline service" means telecommunications service provided over telephone lines, characterized by a wire or wirelike connection carrying electricity or light between the subscriber and the public switched network, and implies a physical connection. Although radio may form part of the circuit, it is not the major method of transmission as in radiotelephone.

(b) Definitions contained in 3 AAC 48.820, 3 AAC 52.340, and 3 AAC 52.399 also apply to the defined words as they are used in 3 AAC 53.700 - 3 AAC 53.720. (Eff. ____, Register __)

Authority:	AS 42.05.141	AS 42.05.221	AS 42.05.311
	AS 42.05.145	AS 42.05.241	AS 42.05.321
	AS 42.05.151	AS 42.05.291	AS 42.05.800

ATTACHMENT 4
ILLINOIS STATE TELECOMMUNICATIONS MODERNIZATION PLAN

THE ILLINOIS TELEPHONE ASSOCIATION

217-525-1044 FAX 217-525-1103 • P.O. BOX 730 • 300 EAST MONROE ST. • SPRINGFIELD, IL 62705

June 21, 1996

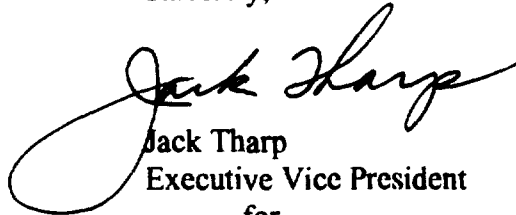
Mr. Orren E. Cameron III, Director
Telecommunications Standards Division
Rural Utilities Service
United States Department of Agriculture
Washington, D.C. 20250-1500

Dear Mr. Cameron:

The purpose of this letter is to submit the final borrower-approved Illinois State Telecommunications Modernization Plan (STMP).

With respect to your letter of June 6, 1996, we concur with your interpretations on items 1 and 3. However, we believe the quote in your letter misstates the text of our plan. We did not include "reference to" in the text. We therefore believe our text is correct as written; "RELRA makes certain short, medium and long range requirements." We would concede that one of the verbs "contains", "establishes" or "imposes" would have been better choices, however. Therefore, we believe the intent of our text is the same as that you stated in your item 2, and as such, we concur in your item 2, also. Eighteen Illinois RUS Borrower concurrence signature sheets are attached, a clear majority. We respectfully request that upon receipt of this final borrower-approved plan, your office receipt stamp and return one of the included copies to Mr. Jack Tharp, the ITA Executive Vice President.

Sincerely,



Jack Tharp
Executive Vice President

for
Steven G. Bowers
ITA STMP Committee Chairman

JT:lc
Enclosure

*STATE TELECOMMUNICATIONS
MODERNIZATION PLAN*

STATE OF ILLINOIS

**RUS BORROWER MEMBERS
OF THE
ILLINOIS TELEPHONE ASSOCIATION**

STATE TELECOMMUNICATIONS MODERNIZATION PLAN

I. GENERAL

In behalf of its RUS borrower member companies, this Plan is submitted by the Illinois Telephone Association (ITA) in response to Rule 7 CFR Part 1751, entitled "Telecommunications System Planning and Design Criteria and Procedures." The rule is part of and responds to the Rural Electrification Loan Restructuring Act of 1993 (RELRA). As written, this modernization plan will be applicable to all RUS telephone borrowers in Illinois.

II. VISION

The ITA RUS borrower member companies envision that future local exchange carrier networks will be intelligent, wired and wireless, multi-media platforms supporting a broad array of communication and information services. The collective capabilities of these platforms will feature intelligence separate from transport and switching and will cross traditional, technological, geographic, and regulatory boundaries, serving both alternative network and end user service requirements. Continued technological advances, consumer demand for multi-media access rather than specific service access, and the creation of the necessary network infrastructure through both traditional investment policies and alliances will drive and enable the evolution of local exchange carriers.

It is with this vision in mind that the following State Telecommunications Modernization Plan has been developed.

III. CURRENT CAPABILITIES OF THE RUS BORROWER COMPANIES' NETWORKS

The current network capabilities of the ITA RUS borrower member companies' networks include: digital switching systems; feeder and distribution systems providing one party service; expanding Signalling System 7 capability; and availability of DTMF calling, enhanced and CLASS features. Interexchange and host-remote connectivity is increasingly optic and some elements of the feeder plant are using optic transmission facilities. Use of hybrid cable is being considered by some companies for use in both feeder and distribution systems. Service quality, as measured by external survey techniques, indicates that service quality in the rural portions of Illinois served by small companies is among the highest in the nation.

IV. GOALS AND OBJECTIVES OF THE STMP

This Modernization Plan provides for improvements to the state's telecommunications network, applies to the RUS borrowers' existing wireline service areas, and adopts the general requirements of the RELRA as follows:

1. Provision for the elimination of party line service;
2. Provision for the availability of telecommunications services for improved business, educational, and medical services;
3. Encourages the improvement of computer networks on information highways for customers in rural areas;
4. Provides for customers in rural areas to be able to receive, over telephone lines, such services as: conference calling; video images; data at the rate of at least one million bits of information per second provided that proper electronics and switching facilities are connected to the network facilities being placed; and the proper routing of information to customers;
5. Based on uniform deployment schedules to ensure that advanced services are deployed in rural and urban areas of the borrowers' established service areas at the same time;
6. Provides for such additional requirements for service standards as required by the RUS administrator.

RELRA makes certain short, medium and long range requirements. This plan defines borrowers' intentions to meet those short, medium and long range requirements through improvement and expansion of the state's telecommunications network. While traditional existing wireline service areas may change as a result of the introduction of a competitive local exchange environment in Illinois, the RUS borrowers intend that the Plan applies to all service areas for which RUS funding is requested.

In general, the RUS borrowers intend that any consumer who makes application for one party service will be able to have that level of service and will also be able to have, as a part of basic telecommunications service, access to emergency services, such as E-911, when such services have been requested by the governmental agencies responsible for these types of services.

The borrowers further intend that access on an optional basis to such services as Call Waiting, Call Forwarding, Abbreviated Dialing, Three Way Calling, and other custom calling services will be available to all who desire these services and that both switching and network facilities will be designed and installed to provide for that capability.

The borrowers further intend that as new facilities are placed, such facilities will be suitable as built, or with future deployment of additional equipment, to provide transmission and reception of voice, data and video services. The long term goal of this deployment will be to provide the capability for the transmission of "entertainment quality" video image to and from customers who desire it. The long term goal would be to have such video quality be comparable to that currently received through cable television, direct broadcast satellite, pay-per-view access, etc.

The capability for digital and data voice services will meet or exceed the transmission rates discussed in the minimum requirements of RELRA. In short, this Plan is based on the premise that traditional regulatory and technological barriers to RUS borrowers' participation in the expanding evolution of telecommunications will be removed and that the facilities placed through the use of RUS funding will enable RUS borrower member companies to participate fully in the voice, data and entertainment video marketplace and that facilities placed using RUS funding will not be, or evolve into, a technological "bottleneck" to the provision of such services.

V. SPECIFIC REQUIREMENTS OF THE STMP

The following are the specific intentions of the RUS borrower member companies requesting approval of this Plan:

1. A network provided by the telecommunications provider will allow for the expeditious deployment and integration of such emerging technologies as may, from time to time, become commercially and economically feasible;
2. The borrowers intend to make a good faith effort to develop affordable tariffs for medical links and distance learning services. Also, in cooperation with customers and the Illinois Commerce Commission, the borrowers intend to make a good faith effort to deploy medical link and distance learning services upon customer request.
3. The RUS borrower member companies are committed to the concept of universal access for all consumers in all geographic areas of Illinois. With that in mind, it is essential that services deployed under this Modernization Plan will be uniformly available to both rural and non-rural areas of telecommunications providers' service areas.

4. While the intent of the State Telecommunications Modernization Plan is toward providing advanced broadband services, the RUS borrower member companies intend not to achieve this objective at the expense of the reliability of basic telephone service. The RUS borrower member companies intend to maintain current levels of basic service reliability and to meet or exceed ICC-mandated minimum reliability levels for voice telecommunications service. As a part of this commitment to basic service reliability, the RUS borrower member companies intend to provide for their respective switching centers an alternative source of power, where economically and technologically feasible, to ensure reliable voice service in the event of temporary electric utility power outage. In general, STMP engineering designs will be formatted to be consistent with those which typically accompany an RUS loan design. They would contain such generally accepted standards as the elimination of loaded plant and station carrier, as well as plant configurations which would ensure achievement of goals outlined in Section IV of this Plan.

VI. RUS BORROWER MEMBER COMPANIES COVERED BY THIS STMP

1. The name and address of the Plan's authorized representative is:

Illinois Telephone Association
on behalf of its RUS Borrower Member Companies
300 East Monroe Street
P.O. Box 730
Springfield, Illinois 62705

2. The following RUS Borrower Member Companies of the Illinois Telephone Association are covered by this Plan:

Adams Telephone Cooperative	LaHarpe Telephone Company
Alhambra-Grantfork Telephone Company	Lakeside Telephone Company
C-R Telephone Company	Leaf River Telephone Company
Cass County Telephone Company	McDonough Telephone cooperative
Egyptian Telephone Cooperative	Mid Century Telephone Cooperative
Flat Rock Telephone Company	Midland Telephone Company
GTE	Montrose Mutual Telephone Company
Grafton Telephone Company	Moultrie Independent Telephone Co.
Gridley Telephone Company	Prairie Telephone Company
Hamilton County Telephone Cooperative	Shawnee Telephone Company
Inland Telephone Company	Wabash Telephone Cooperative

ATTACHMENT 5
TELECOMMUNICATIONS MODERNIZATION PLAN FOR THE TERRITORY OF GUAM

Telecommunications Modernization Plan for the Territory of Guam

November 13, 1995

Prepared by:
Andrew J. Harned
Edward J. Isganitis
Kenneth J. Lutz

NOTICE OF DISCLAIMER

Nothing contained herein shall be construed as conferring by implication, estoppel or otherwise any license or right under any patent, whether or not the use of any information herein necessarily employs an invention of any existing or later issued patent.

Belcore does not recommend products and nothing contained herein is intended as a recommendation of any product to anyone.

If further information regarding technical content is required, please contact:

Joseph A. DeMaio
Belcore
331 Newman Springs Rd., Room 3X-231
Red Bank, NJ 07701-5699

For general information about any other Belcore documents, please contact:

Belcore Customer Service
8 Corporate Place, Room 3A-184
Piscataway, New Jersey 08854-4156
1-800-521-CORE (2673) (US & Canada)
(908) 699-5800 (all others)
(908) 336-2559 (FAX)

1. Introduction	1
2. Background on Guam	2
2.1 Location and Importance.....	2
2.2 Government.....	2
2.3 People.....	2
2.4 Economy	2
2.5 Telecommunications	3
3. The Vision for Guam's Telecommunications Infrastructure	4
3.1 Overview	4
3.2 Competition.....	5
3.3 Modernization	5
3.4 Medical Links and Distance Learning Services.....	5
3.5 Summary	6
4. Plan Coverage	7
5. RUS Modernization Requirements	8
6. Current State of Guam's Telecommunications Infrastructure	9
6.1 General RUS Requirements	9
6.2 Specific RUS Requirements and Goals by Time Frame	10
6.2.1 Short-Term RUS Requirements (1997-2001):	10
6.2.2 Medium-Term RUS Requirements (2002-2006):	11
6.2.3 Long-Term RUS Goals (2007-2011):	11
7. Plans for Modernizing Guam's Telecommunications Infrastructure.....	13
7.1 General Requirements	13
7.1.1 An Engineering Description of the Characteristics of the Future Telecommunications Infrastructure	13
7.1.2 Flexible architectures/designs that enable incorporation of new technologies, as appropriate	14
7.1.3 Guidelines for telecommunications providers to develop affordable tariffs for medical and educational applications	14
7.1.4 Provisions for reliable powering of basic voice telephone services	14
7.2 Short Term (1997-2001)	15
7.2.1 Services and Capabilities Provided.....	16
7.2.2 Technologies and Architectures.....	16
7.2.2.1 Loop Access.....	16
7.2.2.2 Interoffice Transport.....	17
7.2.2.3 Switching	17
7.2.2.4 Signaling and Service Control	17
7.3 Medium Term (2002-2006).....	18
7.3.1 Services and Capabilities Provided.....	18
7.3.2 Technologies and Architectures.....	18
7.3.2.1 Loop Access.....	18
7.3.2.2 Interoffice Transport.....	19
7.3.2.3 Switching	19
7.3.2.4 Signaling and Service Control	19
7.3.3 Economic and Technical Feasibility	20

7.4	Long Term (2007-2011).....	20
7.4.1	Services and Capabilities Provided.....	20
7.4.2	Technologies and Architectures.....	20
7.4.2.1	Loop Access.....	20
7.4.2.2	Interoffice Transport.....	20
7.4.2.3	Switching.....	21
7.4.2.4	Signaling and Service Control.....	21
8.	Summary.....	22
	Glossary.....	26

1. Introduction

This document is the Territorial Telecommunications Modernization Plan (TTMP) for the Territory of Guam and is being submitted by the Guam Public Utilities Commission (GPUC) as the Plan Developer to the Rural Utilities Service (RUS) in accordance with 7 CFR Part 1751. The GPUC printed a public notice that the TTMP would be presented at a public meeting in Agana, Guam, on September 18, 1995, and at the meeting gave the public and interested parties 30 days to file comments. This version of the TTMP has been modified to reflect those comments. In addition, several meetings to discuss the TTMP have been held with the Guam Telephone Authority (GTA), Guam's only local wireline telecommunications provider; and the TTMP has been modified to reflect their comments.

The document begins with brief background information on the Territory of Guam and a statement of the GPUC's vision for telecommunications in Guam. Following this are a discussion of which telecommunications providers are covered by the plan and a description of the RUS Modernization Requirements. The document then shows how the current GTA network already satisfies the requirements and delineates plans for continuing to meet the requirements. The document concludes with a summary checklist showing those requirements that are currently met by the Guam telecommunications infrastructure and those that are planned for the future.

2. Background on Guam

2.1 Location and Importance

Guam is a 212 square-mile island (about three times the size of Washington, D. C.) in the western North Pacific Ocean, approximately 3700 miles west-southwest of Hawaii and 1550 miles from Tokyo. Guam, the largest and southernmost island of the Marianas archipelago, has a varied topography, with a volcanic, mountainous southern region and a limestone coral plateau to the north; and it is surrounded almost entirely by coral reefs. Guam lies at the crossroads of the Pacific and is the social, political, and economic hub of Micronesia. Its location makes the island an ideal tourist destination as well as of strategic importance to the United States Armed Forces, which maintain several facilities there, including Andersen Air Force Base in the northeastern corner of the island.

2.2 Government

Guam has been a U.S. Territory under the authority of the U.S. Federal Government since it was ceded by Spain in 1898 as a result of the Spanish-American War. In 1950, the U. S. Congress passed the Organic Act of Guam, which established the Government of Guam and granted citizenship to Guam's indigenous population. The Territorial Government consists of a locally elected Governor, unicameral Legislature, and Territorial Superior Court located in the capital, Agana. The Territory is represented in the U.S. House of Representatives by an elected, non-voting delegate. The Department of the Interior, Office of Territorial and International Affairs, provides administration at the Federal level.

2.3 People

Approximately 47% of the island's 150,000 inhabitants are of native Chamorro ethnicity. An additional 25% are Filipino, with lesser percentages of Caucasian, Chinese, Japanese, and Korean residents. Island inhabitants are U. S. citizens. Both Chamorro and English are spoken on the island.

2.4 Economy

The two major industries on the island today are government (military, federal, and territorial) and tourism. About 40% of the work force is employed by a government agency. Guam is a popular tourist destination for Japanese travelers, being 1550 miles south-southeast of Japan, as well as tourists from many other Asian countries. More than one million visitors travel to Guam each year. In the face of military cutbacks, tourism plays an increasingly important role in Guam's economy.

In the future, it is expected that Guam will play a significant role in the global economy for the United States. Situated in a time zone with no more than two hours difference with Tokyo, Beijing, Hong Kong, Sydney, and Melbourne, Guam is well positioned to become the

Western Pacific economic center for United States markets. Not only would trade and commerce become increasingly important, but telecommunications would take on a more significant role in Guam's economy.

2.5 Telecommunications

The Guam Public Utilities Commission (GPUC) is an autonomous instrumentality of the Territorial Government, which regulates the activities of the Guam Telephone Authority (GTA). Established in 1973 by the Guam Legislature, the GTA is the only utility on Guam currently providing local wireline telecommunications service. By law, the GPUC only regulates the GTA.

The GTA acquired the island's entire telecommunications system from the Public Utility Agency of Guam, which had provided telecommunications service since it was created by the Organic Act in 1950. The GTA, a public corporation, differs from U. S. mainland telephone companies in that it is an autonomous agency of the Territorial Government and not a for-profit corporation. With 71,000 subscribers, GTA's telephone network is among the most modern in the United States, featuring all-digital switching and all-fiber interoffice facilities as well as cellular service. There is one competing cellular provider on the island, Guam Cellular, Inc.

RCA Globecom was the only long-distance provider to serve Guam until 1982, when IT&E Overseas initiated public toll service. In 1988, MCI acquired RCA Globecom's assets. In 1994, Sprint International began service. While MCI, IT&E, and Sprint are the major long-distance providers, Access Telecommunication, PCI Communications, Colombia Communications, JAMA Corporation, and Island Long Distance Company are among those that are also providing or planning to provide long-distance service on Guam. These services are provided both through INTELSAT satellite facilities and fiber-optic submarine cables.

3. The Vision for Guam's Telecommunications Infrastructure

3.1 Overview

Guam's telecommunications infrastructure should promote a high quality of life for island residents. This includes fostering the economic development of Guam, catering especially to tourism and the developing commercial enterprises, and providing full telecommunications services at affordable levels to residents. Guam's vision calls for a complete range of narrowband and broadband telecommunications services; and full-service integration with the U. S. is currently under consideration (*i.e.*, domestic-rate integration and inclusion in the North American Numbering Plan).

To support the economic development of Guam, the telecommunications infrastructure will provide services and features such as:

- Mobile and Personal Communications System (PCS) services
- Mobile data services
- Entertainment services
- Information services
- Toll service
- Centrex services
- Remote-office communications services (*e.g.*, fax and data communications)
- Video conferencing services
- Number portability
- 800/888 Database Service
- Equal Access
- Ease of Use
- Interoperability and compatibility with other networks and services
- Integration into the global economy

To promote a high quality of life, the telecommunications infrastructure will provide services and features such as:

- Basic, reliable telecommunications services
- Distance education
- Medical image transfers
- Remote medical diagnoses
- Advanced telephony services
- Mobile and PCS services
- Number portability
- Equal Access
- Public phone services
- Toll service
- Entertainment services
- Services for individuals with disabilities (TTY and TDD)
- Security services
- Energy management services

- Affordable, universal access to the National Information Infrastructure (NII) and Global Information Infrastructure (GII)
- Network traffic management

3.2 Competition

Although today the Guam Telephone Authority (GTA) is the only provider of local wireline telecommunications services, future developments in public policy and technology are likely to increase competitive pressures during the next fifteen years. Legislation deregulating the telecommunications and cable TV industries will probably be passed in 1995 or 1996 by the U.S. Congress. Technological developments in Personal Communications Systems (PCS) will drive down costs for wireless services, while broadband access technologies will enable cable TV providers to offer a full range of telecommunications services. Guam's regulatory environment is likely to evolve to provide open and fair competition to meet the objectives stated above.

3.3 Modernization

The existing telecommunications infrastructure in Guam is quite modern because of past policies of the GPUC and the GTA. For the future, this TTMP ensures that new technology will be infused into Guam's telecommunications infrastructure to provide new services to all residents of Guam, regardless of whether they are in urban, suburban, or rural areas. This TTMP also requires that deployment schedules do not favor urban and suburban areas over rural areas. New capabilities for delivering broadband services, mobile services, and a wide variety of other services will be provided by intelligent networks and the fiber-optic transmission facilities already in place to reach all parts of the island. This TTMP encourages the deployment of new technologies, including (1) satellite links for voice, data, and video, and (2) wireless technologies like PCS, for the purposes of providing new services and reducing costs. All new technologies, services, and network arrangements will maintain or increase the high quality, reliability, and survivability of today's network. Equipment will be based on international standards and open architectures to ensure interoperability so that it can be purchased from multiple suppliers to ensure competitive prices. Network operations and management will be automated to ensure high-quality delivery of telecommunications services.

3.4 Medical Links and Distance Learning Services

Because medical and educational services are vital to Guam's economy, this TTMP encourages the use of telecommunications to provide these services to all residents. As examples, medical links would give Guam's small clinics and physician's offices instant contact with experts at major medical centers for help with diagnoses and for displaying images. Distance learning services would provide the opportunity for public-school children in rural areas to have the same range of services available to children elsewhere.

Virtual classrooms would connect students in many schools with a single teacher, who would be provided with the capability to answer questions from any of the students.

A goal of the TTMP is to have medical-link and distance-learning services provided at affordable prices, and the GPUC will require affordable tariffs to the extent allowed by law. The GPUC encourages service providers to develop affordable tariffs through guidelines such as distance-independent rates, special pricing (*e.g.*, providing services at cost), and long amortization periods.

3.5 Summary

It is envisioned that the telecommunications infrastructure on Guam will continue to evolve to provide modern telecommunications services to all residents. Communications media will include voice, broadband data, image, and video; and services will provide mobility, distance learning, medical links, access to the Internet, and full integration into the National and Global Information Infrastructures. The backbone network on Guam will become Guam's information highway, possibly becoming the hub of the Asian-Pacific region as well as part of the Post FTS-2000 network and the new Defense Information Systems Network.

4. Plan Coverage

The Guam Telephone Authority (GTA) is the only provider of local wireline telecommunications services, and the GTA is an RUS Borrower. Although the RUS regulations give a PUC the authority to extend coverage of its Modernization Plan to other providers, current law in Guam gives the GPUC the authority to regulate only the GTA in the telecommunications industry.¹

The current business environment of the telecommunications industry indicates that the same competitive pressures that exist for mainland telecommunications providers will eventually exist for the GTA as well. Although there is no prohibition against other companies offering telecommunications services in Guam, none are currently providing local wireline service. Under current laws they would not be regulated by the GPUC.

1. The GPUC also has regulatory authority in certain other industries.

5. RUS Modernization Requirements

This section references the requirements and goals for a modernization plan that appear in the RUS rules of 7 CFR Part 1751, Subpart B, effective March 15, 1995. The RUS Modernization requirements are divided into three time periods: short-term (up to five years from plan inception), medium-term (up to ten years from plan inception), and long-term (up to fifteen years from plan inception). The plan inception date is one year from the date the RUS accepts the TTMP. There are a number of requirements that must be met during the short- and medium-terms. Several goals are specified for the long-term; but these are only goals, not requirements that have to be met. In addition, the RUS specifies a few broad modernization requirements that are not associated with a particular time frame. The specific requirements are given in the following sections:

- The general RUS and RELRA (Rural Electrification Loan Restructuring Act) requirements for the Modernization Plan are found in Section 1751.106, paragraphs (a) through (h).
- The specific RUS requirements for the short term (1997-2001) are found in Section 1751.106, paragraph (i).
- The specific RUS requirements for the medium term (2002-2006) are found in Section 1751.106, paragraph (j).
- The specific RUS goals for the long term (2007-2011) are found in Section 1751.106, paragraph (k).

The RUS requires both technical and economic feasibility. If the best available technology at the time lacks the capability to meet the needs of the TTMP or if it is not economically feasible to deploy the required technology, then the PUC may amend the TTMP. In addition, as technology changes and evolves, it may also become necessary to amend the TTMP. The specific requirements for amending the TTMP are given in Section 1751.105, "Amending a Modernization Plan."

6. Current State of Guam's Telecommunications Infrastructure

The telecommunications infrastructure of Guam, as provided by the GTA, is very modern, encompassing both wireline and wireless (cellular) service, digital switching facilities and all-fiber-optic interoffice transport facilities. In addition, the GTA connects to a number of interexchange carriers (IXCs) to provide off-island service to more than 230 other countries.

The telecommunications switched network comprises three digital switches that host twelve remote switching centers (RSCs). Two more RSCs will be installed before the end of 1995. The digital switches provide island-wide capabilities for custom calling services, CLASSSM services, Centrex, and PBX support. The switches also use Common Channel Signaling (CCS) and are capable of providing Integrated Services Digital Network (ISDN) access. The use of RSCs allows the copper loops to customer premises to be relatively short. RSCs are connected to the host switch by three self-healing, fiber-optic rings that encircle the island. The network also contains digital loop carrier systems.

All outside-plant cable facilities are installed underground, either buried directly or in conduits. New outside-plant facilities will be placed in conduits or directly buried along with a conduit to facilitate upgrading those facilities in the future.

The current GTA infrastructure already meets most of the RUS Modernization Requirements. The following subsections review the RUS requirements and compare them to the existing infrastructure.

6.1 General RUS Requirements

- 1. Flexible architectures/designs that enable incorporation of new technologies, as appropriate.**

The Guam telecommunications network is based largely on standard technologies and architectures. This should make it easier to incorporate most new technologies as they are developed, especially since they are often developed to be backward compatible.

- 2. Guidelines for telecommunications providers to develop affordable tariffs for medical and educational applications.**

Although such guidelines were discussed in Section 3.5, it should be noted here that existing tariffed network services can already support many medical and educational applications, such as voice, data, and image transmission.

- 3. Provisions for reliable powering of basic voice telephone services.**

All of Guam's existing telecommunications infrastructure is powered reliably from the network and does not rely solely on power from electric utilities.